

Ministry of Water Resources

General Directorate for Water
Resources Management



Strategy for Water and Land Resources in Iraq

Guidance Note Series

Opportunities Data Set

Guidance Note on Data Requirements

GN 05

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This document is one of a series of occasional guidance notes published by the Ministry of Water Resources addressing issues relevant to strategic planning for the sustainable use of the water and land resources of Iraq.

The guidance note presents the proposed overall approach to the development of the Strategy for Water and Land Resources in Iraq (SWLRI), both in Phase 1 and thereafter.

Report Issue and Revision Record

Rev	Date	Description
P1	August 2006	Preliminary when Phase 1 curtailed

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1 THE PLANNING APPROACH

- 1.1.1 Figure 5.1 presents a diagrammatic representation of the proposed overall approach to the development of the Strategy for Water and Land Resources in Iraq (SWLRI), both in Phase 1 and thereafter. The approach has the following particular features:
1. It emphasises a distinction between facts and needs: facts about the present state of the country's water resources and its physical infrastructure (both natural channels and man-made infrastructure), and on the other hand needs and desires for water use, flood control and environmental conditions.
 2. It emphasises, alongside facts and needs, a third data set concerning **opportunities for the future**; these include not only potential physical interventions like completing the Bekhme Dam but also policy changes like a shift to different crops on irrigated land, a changed way of using hydropower stations within the national energy sector, or a different way of interacting with upstream countries.
 3. It emphasises interventions (as defined in point 2 above), and packages of interventions, as units of the planning process.
 4. It emphasises the iterative nature of the evolution of a strategy plan.
- 1.1.2 The diagram divides the planning work into three functional stages and also emphasises the iterative nature of the planning process. Its Stage B begins with the formulation of possible packages of interventions, using the set of opportunities prepared at Stage A, and also the preparation of models, analysis tools and comparison criteria. These will include not only technical but also social, economic and environmental considerations. They will then be used to examine the consequences of each hypothetical package of interventions (which may be quite complex because of the nature of Iraq's interconnected rivers, canals, reservoirs and groundwater) and to compare them. The next step is to consider whether at least some of the packages are useful and well-packaged, and if appropriate to revisit the formulation step and develop new packages in the light of the analysis so far; this is followed by a repeat of the examination and comparison steps. During this iterative process it may prove necessary to go back and seek additional data.
- 1.1.3 Acceptable packages proceed to the stage of formulating the strategy, which is in effect a prioritised set of intervention-packages, and this again is iterative. The formulation will make use of the earlier analyses of individual intervention-packages, and repeat them if necessary to refine the strategy. Costs will be considered, to ensure that the timing of interventions is balanced from year to year to match the available or probable human and financial resources.

2 WHAT ARE ‘OPPORTUNITIES’?

- 2.1.1 Opportunities represent possible actions or interventions for MoWR and other ministries to budget and programme for, and to implement in the short, medium or long term horizons. They represent potential calls on the national budget in the near and longer term and as such need to be prioritised for the water and agriculture sectors as a whole. Opportunities cover an exceedingly wide range of possibilities from new studies to actual construction, from policy change to capacity building and training, etc.
- 2.1.2 Each ministry has its own ideas for future activities in the short and longer term to fulfil its particular mandate and contribute to national development. Water and land issues may feature only indirectly or as a minor component in the projects planned by some ministries but these projects might have consequences for the water sector and so are relevant to the SWLRI planning process.
- 2.1.3 Projects identified by all the ministries contributing to SWLRI are to be collated to build up the opportunities data set.

3 WHAT LEVEL OF PREPARATION IS EACH OPPORTUNITY AT?

- 3.1.1 From an initial idea to completion of any project is a staged process. It is common for the stages to be described in terms of the project cycle. Figure 5.2 illustrates this concept as it is used by the World Bank. A key stage in the cycle is ‘identification’ when an idea is first formulated into a project concept, then reviewed against wider objectives and also checked for internal consistency against the particular criteria that the ministry or donor has chosen to apply. As the project progresses through the first half of the project cycle it is more closely defined and improved. Since SWLRI is about planning for the future the opportunities data set should contain all proposals that have yet to secure funding and start implementation.
- 3.1.2 As it will be necessary for the SWLRI team to compare ideas that are different stages in the project cycle some form of brief standardised report will be required. This may be based on the World Bank’s Project Information Document format. The SWLRI team will complete this in consultation with the ministry concerned.
- 3.1.3 Where projects are at an advanced stage of preparation it will be important to review the background studies, particularly environmental impact assessments. For ideas that are at a very early stage the process of preparing the standardised report with the ministry may itself help to bring the idea forward.
- 3.1.4 A sample format for this standardised report is given in Appendix A. A blank form and a partially completed example are given to illustrate the concept.

4 HOW WILL OPPORTUNITIES BE TREATED IN THE SWLRI PLANNING APPROACH?

- 4.1.1 The SWLRI Unit will use the opportunities data set, and also invite and welcome suggestions from all stakeholders, to distil out a manageable set of packages for the initial comparisons.
- 4.1.2 After the consequences of various potential intervention-packages have been worked out, the next step will be to compare the packages. It is proposed to use a form of multi-criterion analysis, which should be systematic and transparent so that decision-makers can understand how the recommendations have been arrived at. The analysis will be based on criteria that are developed with the stakeholders.
- 4.1.3 A key process at the end of the first round will be to review how the process worked in all aspects and to provide feedback to the stakeholders.

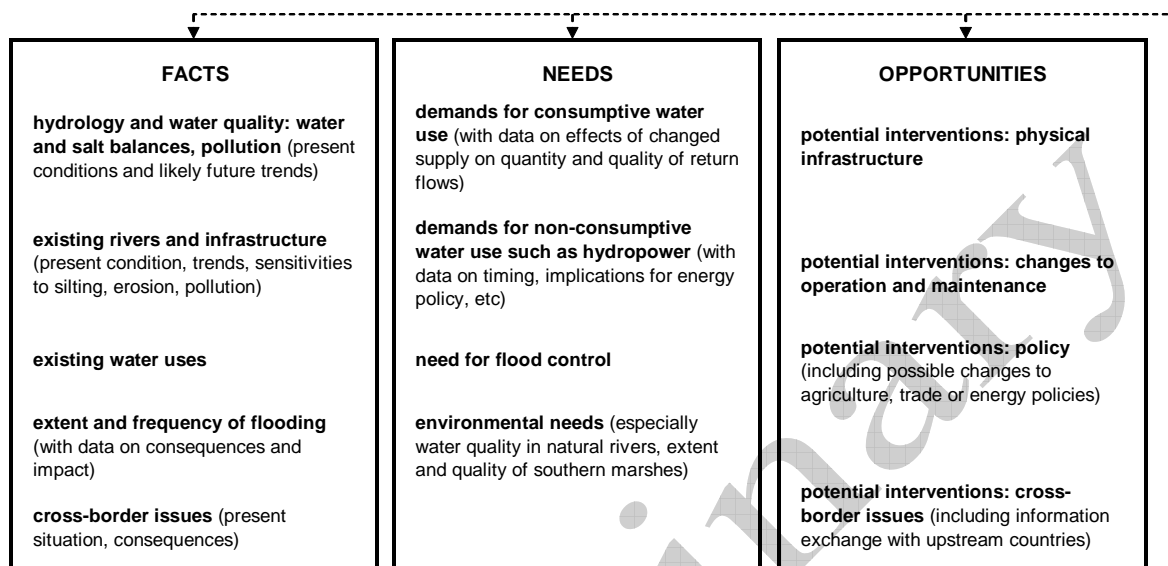
5 WHAT IS NEEDED FROM EACH MINISTRY?

- 5.1.1 The SWLRI Unit need to assemble a **long** list of opportunities covering the whole spectrum of water and land activities in order to start the planning process and demonstrate the modelling tools.
- 5.1.2 A start has been made by reviewing material on the International Reconstruction Fund Facility for Iraq web site www.irffi.org. However, these are just the proposals that have formally been put forward to the particular donors associated with this fund, and are therefore all at an advanced stage in preparation.
- 5.1.3 The SWLRI Unit requires from each ministry a list of projects, proposals, concepts, and possible ideas prepared by their own planning teams which can be construed as 'opportunities' that relate to water and land. To facilitate this process each ministry will be asked to nominate a point of contact in their planning team, and may be offered assistance in the data compilation if this is required.
- 5.1.4 The report format illustrated in Appendix A identifies the **supporting information** about each opportunity that is required by the SWLRI team. References for all studies and surveys related to the project proposals are requested from the ministries in order to provide a clear picture of the previous work done to prepare the project, and to ascertain the stage of the proposal in the project cycle. The brief standardised report format has a two page summary of *Basic Information about the Proposed Project* and *Supporting Information* (see Appendix A for template and example). The reporting format, a Word document, accompanying this guidance note is available to assist the ministries in providing the requested supporting information. While the format illustrated in Appendix A would be particularly useful, the ministry can discuss other formats if that is their preference.

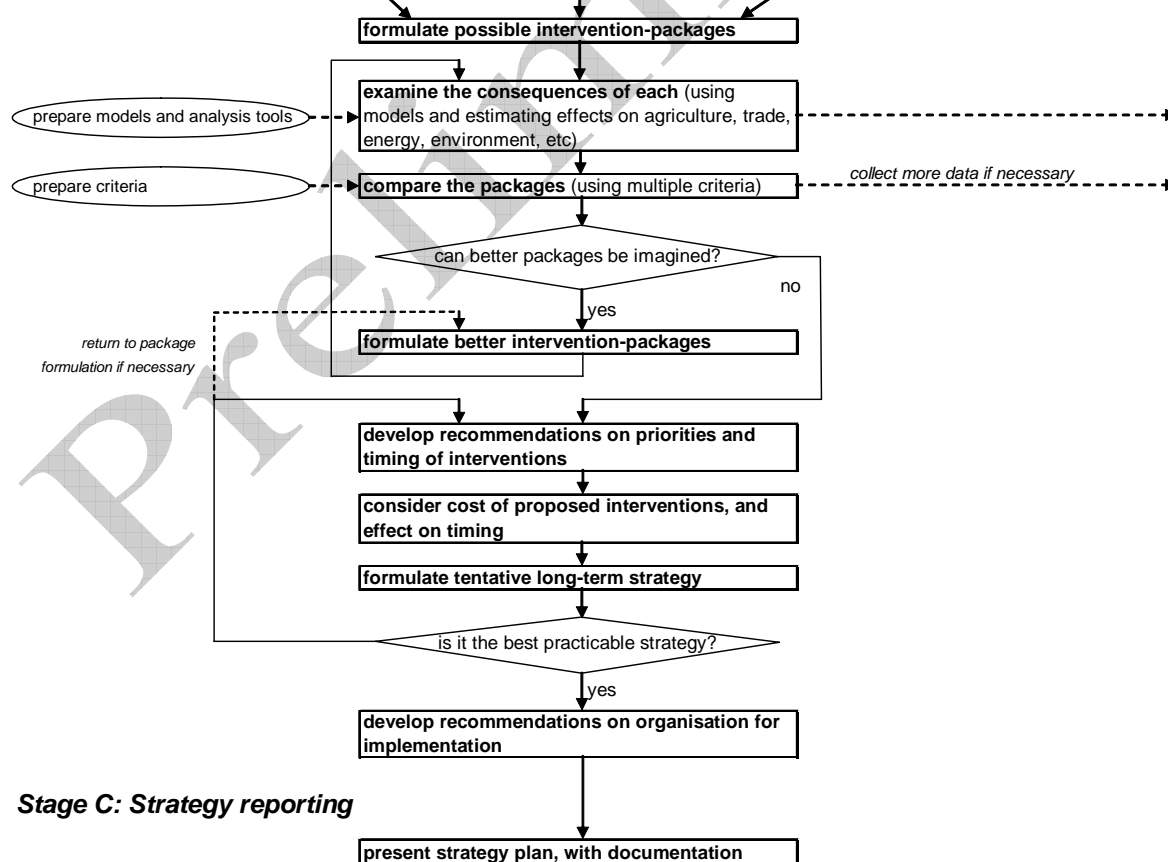
- 5.1.5 Ministries can also put details of their ‘opportunities’ directly onto their own area on Claromentis in any format of their choice.

Figure 5.1: The Planning Approach

Stage A: collection of necessary data

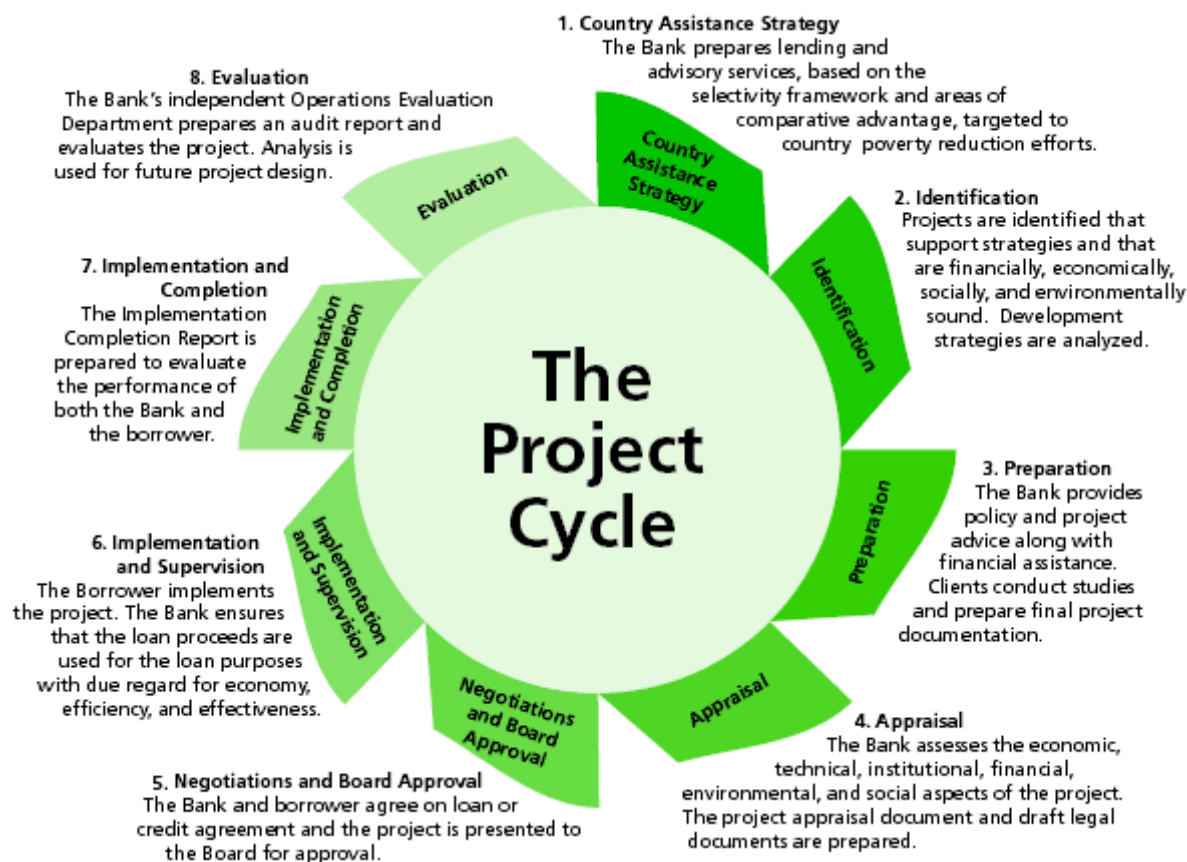


Stage B: evolution of the strategy plan



Stage C: Strategy reporting

Figure 5.2: Project Cycle Concept (Source World Bank)



Appendix A SWLRI Opportunities Report Format

A.1 Sample Reporting Format

Sample reporting format loosely based on World Bank Project Information Document.

A worked example is given in Section A.2.

Preliminary

Basic Information about the Proposed Project

		<i>Please complete all sections</i>
Project Name		
Project Description		
Location		
Category of proposal (<i>strike out categories which do not apply</i>)		Monitoring/field investigations Study Design Construction Training/capacity building Institutional/legal Socio-economic Environmental Safety Other
Implementing Agency		
Estimated duration		
Target start date		
Estimated international contribution (\$)		
Estimated counterpart costs (\$)		
Source of funds if known (<i>if a potential source of funding has been identified please specify</i>)		
Organisation putting forward the proposal (<i>ministry, department, and contact person in the event of queries</i>)		
Date received by SWLRI Unit		
SWLRI ID code		

Supporting Information *(To be completed by ministries)*

Stages in preparation of this project	Completed	
	Y, N, N/A	Year
Strategy study		
Pre-feasibility study		
Feasibility study		
Detailed design study		
Procurement (Tender Docs)		
Environmental Impact Assessment		
Surveys/field investigations		
Institutional analysis		
Training needs assessment		
Other eg World Bank Safeguards		

Note:
N/A – Not applicable
for this project proposal

Reference documents and maps <i>(extend list if more documents are available)</i>			
No.	Year	Author	Title
1			
2			

To be completed by SWLRI Unit

Record of data collection and review <i>(date and/or actions)</i>							
No.	Requested from ministry	Date Received	If required:	Reviewed	If required:	If required:	Upload
			Returned		Translated	Scanned	
1							
2							

1 Key development issues and relation to national priorities

2 Proposed objective(s)

3 Description

3.1 Project scope and area

3.2 Project components

4 Implementation Strategy

4.1 Target beneficiaries

4.2 Implementation arrangements

4.3 Alternative implementation strategies

5 Safeguard policies that might apply (World Bank guidance)

Tick boxes where applicable:

Applicable?	Safeguard Policy: If applicable, how might it apply
<input type="checkbox"/>	Environmental assessment
<input type="checkbox"/>	Natural habitats
<input type="checkbox"/>	Pest management
<input type="checkbox"/>	Involuntary resettlement
<input type="checkbox"/>	Indigenous people
<input type="checkbox"/>	Forests
<input type="checkbox"/>	Safety of dams
<input type="checkbox"/>	Cultural property
<input type="checkbox"/>	Projects in disputed areas
<input type="checkbox"/>	Projects on international waterways

Environmental Assessment Category¹:

☐ A ☐ B ☐ C ☐ To be determined

If 'To be determined', state what steps will be taken to determine category.

6 Risks

6.1 Factors that may cause delay at the outset of the project

¹ World Bank categories:

Category A – Proposed project is likely to have significant adverse environmental impacts that may affect an area broader than the sites subject to physical works. A full Environmental Impact Assessment should be prepared examining the project's potential negative and positive environmental impacts.

Category B – Proposed project potential impacts are less adverse than those for a Category A project. An environmental assessment is required but may be narrower in scope than that for a Category A project.

Category C – Proposed project is likely to have minimal or no adverse environmental impacts. No additional environmental assessment is required.

6.2 Factors which could over time cause major delays or prevent achievement of the projects outputs and objectives

7 Inputs

7.1 Resources required

7.2 Preliminary estimate of funding requirements

Appendix A Supporting information

(Location maps etc)

A.2 Worked Example

Partial worked example based on information from the Ministry of Water Resources web site.

Preliminary

Basic Information about the Proposed Project

		<i>Please complete all sections</i>
Project Name and Ministry ID		DIWANIYA SAFFIYA RECLAMATION PROJECT Major-029
Project Description		Construction of a complete irrigation and drainage system to improve land productivity in this region
Location		Euphrates river basin to the south of Baghdad city about 200Km and it goes along the 2 sides of Shatt Al Diwaniya
Category of proposal (strike out categories which do not apply)		Monitoring/field investigations Study Design Construction Training/capacity building Institutional/legal Socio-economic Environmental Safety Other
Implementing Agency		Ministry of Water Resources
Estimated duration		30 years
Target start date		2006
Estimated international contribution (\$)		
Estimated counterpart costs (\$)		
Estimated total project cost (\$)		\$37,305,000 (estimated in 2005)
Source of funds if known (if a potential source of funding has been identified please specify)		Not known
Organisation putting forward the proposal (ministry, department, and contact person in the event of queries)		MoWR web site
Date received by SWLRI Unit		
SWLRI ID code		

Example using information from the Ministry of Water Resources web site downloaded February 2006

Supporting Information *(To be completed by ministries)*

Stages in preparation of this project	Completed	
	Y, N, N/A	Year
Strategy study	Y	1982
Pre-feasibility study		
Feasibility study		
Detailed design study		
Procurement (Tender Docs)		
Environmental Impact Assessment		
Surveys/field investigations		
Institutional analysis		
Training needs assessment	N/A	
Other eg World Bank Safeguards		

Reference documents and maps <i>(extend list if more documents are available)</i>			
No.	Year	Author	Title
1	1982	Solkhozpromexport	General Scheme for Water Resources and Land Development in Iraq
2			

To be completed by SWLRI Unit

Record of data collection and review <i>(date and/or actions)</i>							
No.	Requested from ministry	Date Received	If required: Returned	Reviewed	If required: Translated	If required: Scanned	Upload
1		Aug 05	N/A				Y
2							

1 Key development issues and relation to national priorities

The agriculture sector has a potential to contribute more to the country's economic development by raising rural incomes and boosting non-oil exports. Irrigation is vital for improving productivity in the sector.

2 Proposed objective(s)

Improve land productivity in this region; provide water resource; improve decreasing groundwater level; increase food production; provide increased work opportunities, provide initial requirement for local industry; and improving the quality and quantity of the livestock production.

3 Description

3.1 Project scope and area

The project includes the construction of a complete irrigation and drainage system. The irrigation network is divided into three parts, each irrigated by a main canal, as follows: 1. MC1 canal, 17,800 hectares, left side of Shatt Al-Diwaniya, 1 pumping station 2. MC3 canal, 48,600 hectares, left side of Shatt Al-Diwaniya, 1 pumping station 3. MC2 canal, 87,000 hectares, left side of Shatt Al-Diwaniya, 1 pumping station. The drainage network comprises of 2 main drains, MD1 (on the left side of the project) and MD2 (on the right side of the project). MD1 goes to the Rumeitha drain (D3) at km 26.400 via pumping station; the length of this drain is about 42.120 km and it serves about 37,000 Hectares. MD2 goes to the Euphrates eastern drain at km 40.300 via pumping station; the length of this drain is about 58.100 km and it serves about 57,750 hectares. The project locates in Euphrates river basin to the south of Baghdad city about 200KM and it goes along the 2 sides of Shatt Al Diwaniya – from the north of Al Diwaniya to Al Najmi canal which is branched from the left of Shatt Al Diwaniya –The south of Al Hamzah city. Shatt Al Diwaniya which is branched from Shatt Al Hilla tails is considered the main source of irrigation in the project's area.

3.2 Project components

A. Irrigation network : According to the proposal of developing irrigation network of Al Diwaniya – Shafi'ya project, this project is divided into 3 parts each part is irrigated by a main canal, and as the following: • The 1st part: It is irrigated by the canal (MC1) for a net area which is about (31880) acres and it locates to the left side of Shatt Al Diwaniya. • The 2nd part: It is irrigated by the main canal (MC3) for a net area which is about (113608) acres and it locates to the left side of Shatt Al Diwaniya also. • The 3rd part: It is irrigated by the main canal (MC2) for a net area which is about (202960) acres and it locates to the right side of Shatt Al Diwaniya. In addition to the above canals, this network includes minor feeding & distributing canals lined with concrete.

B. Drainage network: The proposed drainage network for the project comprises of 2 main drains—one of these drains is on the left side of the project, & this main drain is called (MD1), the other one is on the right side, & it is called (MD2). The drainage of the drain (MD1) goes to Al Rumeitha drain (D3)at the kilometer (26,400) via pumping station , the length of this drain is about (42,120) KM into which many minor & collecting drains flow , and it serves about (31435) hectares . The drain (MD2) serves net area about (49049) hectares, its drainage goes to Euphrates eastern drain at the kilometer (121) via pumping station to raise water at the kilometer (40,300), its length is about (58,100)KM into which many minor & subsidiary drains flows.

4 Implementation Strategy

4.1 Target beneficiaries

Farmers, and their dependents, that live and work in the project area. The local economy will also benefit.

4.2 Implementation arrangements

Ministry of Water Resources

Ministry of Agriculture – extension activities, etc....

4.3 Alternative implementation strategies

5 Safeguard policies that might apply (World Bank guidance)

Tick boxes where applicable:

Applicable?	Safeguard Policy: If applicable, how might it apply
<input checked="" type="checkbox"/> [X]	Environmental assessment
<input checked="" type="checkbox"/> [X]	Natural habitats
<input checked="" type="checkbox"/> [X]	Pest management
<input type="checkbox"/> []	Involuntary resettlement
<input type="checkbox"/> []	Indigenous people
<input type="checkbox"/> []	Forests
<input type="checkbox"/> []	Safety of dams

Applicable?	Safeguard Policy: If applicable, how might it apply
<input type="checkbox"/>	Cultural property
<input type="checkbox"/>	Projects in disputed areas
<input checked="" type="checkbox"/>	Projects on international waterways

Environmental Assessment Category¹:

☒ A ☐ B ☐ C ☐ To be determined

If 'To be determined', state what steps will be taken to determine category.

6 Risks

6.1 Factors that may cause delay at the outset of the project

Outstanding studies of safeguards issues to satisfy donor regulations and procedures.

6.2 Factors which could over time cause major delays or prevent achievement of the projects outputs and objectives

Previous policies of keeping food prices artificially low led to a drastic decline in agricultural production. Success of the project will depend on policy reform to reduce subsidies and adopt a free market. Adequate support for farmers both during the transition to market based and to take up new practices, extension services need to be enhanced. Formation of water user associations and their development may delay progress towards sustainable O&M.

¹ World Bank categories:

Category A – Proposed project is likely to have significant adverse environmental impacts that may affect an area broader than the sites subject to physical works. A full Environmental Impact Assessment should be prepared examining the project's potential negative and positive environmental impacts.

Category B – Proposed project potential impacts are less adverse than those for a Category A project. An environmental assessment is required but may be narrower in scope than that for a Category A project.

Category C – Proposed project is likely to have minimal or no adverse environmental impacts. No additional environmental assessment is required.

7 Inputs

7.1 Resources required

Further studies? Give details eg Environmental Impact Assessment

7.2 Preliminary estimate of funding requirements

Total estimated project cost - \$37,305,000 (2005)

Appendix A Supporting information

Map showing location of proposed project

